CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.14/2019-20 **Date:** 19.07.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M Yogesh (Professional Global Infrastructure Private Limited),** Bangalore.
Name of the Work	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
Type of Mix	Wet Mix macadam
Date of Testing	19.07.2019

Sl No.	Details	Trial No.			Average
		1	2	3	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	383	385	389	22.56
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	87	89	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	298	298	300	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	22.19	22.60	22.88	

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಜಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.14/2019-20

12.04.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M Yogesh (Professional Global Infrastructure Private Limited),** Bangalore.
Name of Work	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	12.04.2019

Result : Flakiness Index = **11.69%**

Elongation Index = **13.52%**

Result : Combined Flakiness & Elongation index **25.21%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.14/2019-20 17.05.2019

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M Yogesh (Professional Global Infrastructure Private Limited),** Bangalore.
Name of Work	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Sample ID	WMM Layer
Date of Testing	17.05.2019

Result : Flakiness Index = **12.65%**

Elongation Index = **13.98%**

Result : Combined Flakiness & Elongation index **26.63%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

→ This test report should not be reproduced except in full, without written approval of the laboratory
→ The results indicated above are based on the tests carried out on the samples received in the laboratory
→ Any Query regarding the report must be reported within 30 days from the date of testing.

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.14/2019-20 Date: 03.08.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M Yogesh (Professional Global Infrastructure Private Limited),** Bangalore.
Name of the Work	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Open Graded Premix surface
Date of Testing	03.08.2019

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	387	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	87	90	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	298	297	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	22.60	23.26	**22.93**

Comments:

→ Maximum allowable Aggregate Impact value for OGPS is 30%

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory

⇒ The results indicated above are based on the tests carried out on the samples received in the laborat

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No: CQCE/BBMP/MY/W.No.14/2019-20 05.08.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF OPEN GRADED PREMIX SURFACE
AASHTO T 164 & AASHTO T 30

CLIENT	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
AGENCY	**Sri. M Yogesh (Professional Global Infrastructure Private Limited),**
NAME OF THE WORK	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
SAMPLE I/D	Sample Supplied by Agency
DATE OF TESTING	05.08.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	473.5	474.5
3. Weight of Asphalt and Mineral matter Extracted, g	26.5	25.5
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	26.5	25.5
7. Bitumen content in %	5.30	5.10
8. Average	**5.20**	

GRADATION AFTER EXTRACTION

TABLE - 1

Sieve size in mm	Percent Passing, %		Specified Limits as per MORTH specification
	Sample 1	Sample 2	
13.2	100.00	100.00	100
11.2	96.3	95.8	88-100
5.6	36.2	67.5	31-52
2.8	13.2	14.9	5.-25
0.09	2.9	2.1	0-5

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory
⇒ Any Query regarding the report must be reported within 30 days from the date of testing

ಪತ್ರಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಹೊಗಲ್ಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No: CQCE/BBMP/MY/W.No.14/2019-20

05.08.2019

BITUMEN CONTENT AND GRADATION DETERMINATION OF OPEN GRADED PREMIX SURFACE
AASHTO T 164 & AASHTO T 30

CLIENT	Executive Engineer, Dasarahalli Zone, BBMP, Bangalore.
AGENCY	Sri. M Yogesh (Professional Global Infrastructure Private Limited),
NAME OF THE WORK	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
SAMPLE I/D	Sample Supplied by Agency
DATE OF TESTING	05.08.2019

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474.5	473
3. Weight of Asphalt and Mineral matter Extracted, g	25.5	27
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	25.5	27
7. Bitumen content in %	5.10	5.40
8. Average	5.25	

GRADATION AFTER EXTRACTION

TABLE - 1

Sieve size in mm	Percent Passing, %		Specified Limits as per MORTH specification
	Sample 1	Sample 2	
13.2	100.00	100.00	100
11.2	91.6	92.3	88-100
5.6	42.3	41.8	31-52
2.8	15.3	14.6	5.-25
0.09	3.1	3.9	0-5

Note:

⇒ This test report should not be reproduced except in full, without written approval of the laboratory
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory
⇒ Any Query regarding the report must be reported within 30 days from the date of testing

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ. ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.14/2019-20 Date: 12.08.2019

TEST REPORT

Client	:	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	:	**Sri. M. Yogesh (Professional global infrastructure privite limited),** Bangalore.
Name of the work	:	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
Source of location	:	Hot mix Plant, Bangalore
Date of testing	:	12.08.2019

The results of the tests conducted on the bitumen sample using for Semi Dense Bituminous Concrete

Sl. No	Description	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	88	80 to 100
2	Softening point, ^{0}C	46	Min. 45
3	Ductility at 27^{0}C, cm	100 >	Min. 50
4	Flash Point, ^{0}C	302	Min. 220

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.
⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.
⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಜಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

Scanned by CamScanner

CIVIL QUALITY CONSULTANTS & ENGINEERS

(Buildings Geo-Tech & Highway Materials Testing Laboratory)
An ISO 9001: 2015 Certified Company
NABL Accredited As Per ISO/IEC : 17025:2005 Laboratory

JAS-ANZ
ISO 9001:2000 CERTIFIED

Job No.: CQCE/BBMP/MY/W.No.14/2019-20 Date: 12.08.2019

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer,** Dasarahalli Zone, BBMP, Bangalore.
Agency	**Sri. M. Yogesh (Professional global infrastructure privite limited),** Bangalore.
Name of the Work	Restoration of BWSSB Road cut portion done by BWSSB (For Water Line and Sanitary Line) in Sidedahalli Village in Ward No.14, Dasarahalli Sub Division, BBMP, Bangalore.
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	12.08.2019

Sl No.	Details	Trial No. 1	Trial No. 2	Trial No. 3	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	375	377	379	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	81	83	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	294	294	293	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.60	22.02	22.69	**22.10**

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

Note:

Þ This test report should not be reproduced except in full, without written approval of the laboratory
Þ The results indicated above are based on the tests carried out on the samples received in the laboratory
Þ Any Query regarding the report must be reported within 30 days from the date of testing

For CIVIL QUALITY CONSULTANTS & ENGINEERS

Authorised Signatory

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು

Office & Laboratory : # 133, Bhuvaneshwarinagar, Dodda Basti Main Road, Bangalore - 560 056.
e-mail:civilqualityconsultants@gmail.com Ph: 080-23240644 / Mob: 8553518550

Scanned by CamScanner